CLAIMS

1. A flask for containing molding sand, comprising:

a body that defines an opening in which a sand mold is to be molded, said body having an inlet for introducing said mold sand into said opening; and

a mounting member attached to said body for mounting said flask on a plurality of connecting arms that is adapted to integrally connect one flask to another flask such that the one flask and the other flask are opposed to, and spaced apart from, each other, while they are supported by said connecting arms.

2. A flask as in claim 1, wherein said body or said mounting member has an engaging member for engaging an actuator outside of said flask such that a force or forces from said actuator can be transmitted to said flask.

3. A flask as in claim 1 or 2, wherein said mounting member is integrally molded to said body.

4. A flask as in claim 1 or 2, wherein said mounting member is formed to separate from said body and is mechanically attached to said body.

5. A flask as in claim 3 or 4, wherein a pair of said flasks is formed as a flask unit.

6. A flask as in claim 5, wherein the one flask of said flask unit has a form that is the same as that of the other flask of said flask unit.

7. A flask as in claim 5, wherein the one flask of said flask unit has a form that differs from that of the other flask of said flask unit.

8. A flask as in claim 6 or 7, wherein said flask unit has a pair of said connecting arms that are connected to said pair of said flasks by said mounting members.

9. A flask as in claim 8, wherein said flask unit has a pattern plate that can be grasped between said pair of said flasks, wherein said pattern plate has a pattern on at least one surface.

10. A flask as in claim 9, wherein each flask includes a pair of said mounting members that are opposed to each other across said opening and are outwardly projected from each flask, wherein each mounting member has an aperture to be positioned where one aperture of said one flask is aligned with the corresponding aperture of said other flask, when said one flask and said other flask overlap and are aligned with each other.

11. A flask as in claim 10, wherein each connecting arm of said flask unit is slidingly fitted into the corresponding apertures.

12. A flask as in claim 11, wherein said pattern plate is a match plate that has patterns on both its surfaces, and wherein said flask unit is to be incorporated in a flaskless molding machine that has a pair of pressing members for pressing said molding sand.

13. A method for molding a mold with said flaskless molding machine using the flask as in claim 12, said method comprising the steps of:

defining a pair of molding spaces by inserting each pressure means into each opening of said pair of flasks that is formed from said flask unit;

introducing said molding sand into said pair of molding spaces through said inlets; and

molding two half –molds by pressing said introduced molding sand with said pressing members.

14. A method as in claim 13, wherein it further comprises a step of moving said flask unit between a position where said defining step is carried out and a position where said introducing step is carried out.

15. A method as in claim 14, wherein said pressing step is carried out on a path on which said moving flask unit is moved.

16. A method as in claim 15, wherein said pressing that is carried out on said path is carried out before said flask unit is moved.

17. A method as in any of claims 13 to 16, wherein it further comprises a step of moving said pair of half-molds in said flask unit to a position where a core is to be fitted within each half-mold after said pressing step.

18. A method as in any of claims 13 to 16, wherein it further comprises a step of moving said pair of half-molds in said flask unit to a position where said mold is removed.

19. A method as in any of claims 14 to 18, wherein said flaskless molding machine includes a rotation frame for moving said flask unit between a position where said defining step is carried out and a position where said introducing step is carried out, and a pair of driving means for driving said pair of pressing members, respectively.

20. A method as in claim 19, wherein said driving means are moved with said rotation frame in unison.

21. A method as in claim 19, wherein said driving means are in fixed positions.

22. A method as in claim 19, wherein one of the pair of the driving means is moved with said rotation frame in unison, while another driving means is in a fixed position.

23. A method as in any of claims 13 to 22, wherein said defining step simultaneously defines said pair of molding spaces.

24. A method as in any of claims 13 to 22, wherein said defining step defines one molding space and another molding space at different times.

25. A method as in any of claims 13 to 22, wherein said defining step is completed before said introducing step.

26. A method as in any of claims 13 to 22, wherein said introducing step includes at least one additional defining step.

27. A method as in any of claims 13 to 22, wherein said half-molds are poured before said half-molds are removed from said flask.

28. A flask as in claim 11, wherein said flask unit is to be incorporated in a flask-molding machine that has an upper pressing member and a lower pressing member for pressing said molding sand.

29. A method for molding a mold with said flask-molding machine, using the flask as in claim 28, said method comprising the steps of:

defining an upper molding space and a lower molding space by holding said pattern plate between an upper flask unit and a lower flask unit, and by inserting said upper and lower pressing members into each opening, which is opposed to said pattern plate, of said upper and lower flasks, respectively, in said molding machine;

positioning said upper and lower flasks, and said pattern plate at their vertical positions, and upwardly-moving said inlets;

introducing said mold sand from said inlets into each molding space;

re-positioning said upper and lower flasks, and said pattern plate to their horizontal positions, while further inserting said upper and lower pressing members into each opening so as to press said mold sand in each molding space;

unloading said pattern plate from said upper and lower flasks to carry out said pattern plate from the molding machine;

overlapping said upper flask with said lower flask to define a product cavity;

transferring said upper flask unit and said lower flask unit to a pouring means for pouring, and for transferring said poured upper and lower flask units to a disassembling means for disassembling them, where they are disassembled; and

sending on said disassembled said upper and lower flask units to said flask- molding machine.

30. A method as in claim 29, wherein said flask-molding machine comprises:

a first transferring means for carrying in and out said pattern plate between said upper flask and said lower flask;

a pressing means, having said upper and lower pressing members, for reversibly rotatably supporting said upper and lower flasks, and said pattern plate between a position where they are in vertical positions and a position where they are in horizontal positions, in a normal plane;

a driving means for reversibly rotating said pressing means;

an introducing means for introducing said molding sand into said upper and lower flasks that are brought to their vertical positions by drivingly rotating said driving means; and

a second transferring means for carrying said upper and lower flask units in and out of said pressing means, and for elevating and moving said upper flask.

31. A method as recited in claim 30, wherein said upper and lower pressing members are inserttable into the corresponding openings, which are opposed to said pattern plate, of said upper and lower flasks, while said pattern plate is pinched between said upper and lower flask units.